

ABSTRACT

An organic nitrogen compound with a boiling point lower than a 50% distillation temperature of feed oil is contacted with hydrocracking catalyst as pre-treatment. The hydrocracking catalyst is contacted with the feed oil and hydrogen to perform hydrocracking and obtain a hydrocarbon with a boiling point lower than the feed oil. Moreover, pre-treatment can also be performed by contacting hydrocracking catalyst with a petroleum fraction that has a 95% distillation temperature lower than the 50% distillation temperature of the feed oil and that contains organic nitrogen compound. As a result, the initial deactivation rate of the hydrocracking catalyst can be slowed and the middle distillate yield can be improved, and further, activity after initial deactivation can be improved.